

TIMOTHY

Phleum pratense L.

plant symbol = PHPR3

Contributed by: USDA NRCS Plant Materials Program



James R. Johnson
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Uses

Livestock: Timothy is used for pasture (although other cool-season grasses are preferred) and silage, but mostly for hay. It is palatable and nutritious. It makes a first rate companion grass for alfalfa, trefoil, or clover as it is the grass least competitive with legumes.

Erosion control: Timothy can be used with legumes and/or other grasses in a mix for cover purposes, filter strips, waterways, and other critical area applications.

Wildlife: Timothy is commonly found in wildlife mixtures for nesting, brood cover, and escape.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's

current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

Phleum pratense L., timothy, is a relatively short-lived, cool-season perennial that grows in stools or clumps and has a shallow, compact, and fibrous root system. It grows in erect culms 20 to 40 inches tall. Leaves vary in length from a few inches to a foot and are about 1/4 inch wide, narrowing gently toward the tip. Heads are spike-like and dense, from 2 to 6 inches in length. Seed is very small and usually remains enclosed in the glumes. There are approximately 1,230,000 seeds per pound. Timothy is different from most other grasses in that 1 or occasionally 2 of the basal internodes of the stem swell into a bulb-like growth. This characteristic is often used for identification of the plant during its early stages of growth.

Adaptation and Distribution

Timothy is adapted to a cool and humid climate. Timothy thrives best on rich, moist bottomlands and on finer textured soils, such as clay loams. It does not do well on coarser soils. It prefers a pH of 5.5 to 7.0. Timothy will grow for a time on soils low in fertility, but it is better adapted to a high fertility soil. It is not well adapted to wet, flat land where water stands for any considerable time, though it can withstand somewhat poorly-drained soils. Under limited moisture conditions, it makes a poor recovery and it does not tolerate drought or prolonged high temperatures.

Timothy is distributed throughout the entire United States. For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Timothy is usually seeded in mixtures with legumes. This mixture may be drilled with a small grain. If planted with a winter grain, the timothy is seeded with it, and the legume is planted early the following spring. Seeding depth of timothy should be 1/2 inch. A firm, weed-free seedbed is a key to a successful planting. Common seeding rates are 8 to 10 pounds per acre when seeded alone and 4 to 6 pounds per acre when seeded in mixtures.

Management

Timothy is highly responsive to fertilizers, which should be applied frequently in ample quantities. Fertilizer, especially nitrogen, is important when

legumes have almost disappeared from the hay or pasture mixture. Timothy stands become weak under close and continuous grazing. A fundamental reason for the decline of timothy under poor grazing practices is injury to the bulblets. These bulblets form in the spring at the same time the stem elongates. Food material is stored in them, and they may be destroyed by trampling of grazing animals. Timothy can be initially grazed before jointing and again between early head to full head. Second and successive grazing should also occur before jointing and when basal sprouts appear at the soil surface. After the second grazing, plants usually do not joint; therefore, sprouts are primary guides. Timothy should be cut for hay or silage from early to full head. Make successive harvests for hay and silage when basal sprouts appear at the soil surface. Sterile seed-heads may be 15 to 20 inches up the stems when sprouts appear at the time of second cutting. Growing points stay below the ground line after a second cutting. Graze or cut to heights of 3 inches or more.

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Pests and Potential Problems

Stem rust is a disease that can cause loss of vigor and forage quality to timothy. Rust-resistant varieties have been developed to control this disease.

Cultivars, Improved, and Selected Materials (and area of origin)

Most of the timothy grown in the Northeast U.S. is unimproved common timothy. Improved cultivars and places of development are: 'Essex' and 'Cornell 1777' (New York); 'Lorain' and 'Marietta' (Ohio); 'Itasca' (Minnesota); and 'Clair' (Kentucky). Canadian developments are 'Climax', 'Drummond', 'Medon', and 'Paton'. Common timothy and most cultivars can be readily obtained from commercial sources.

Control

Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA, NRCS does not guarantee or warrant the products and control methods named, and other products may be equally effective.

For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS <<http://plants.usda.gov>> and Plant Materials Program Web sites <<http://Plant-Materials.nrcs.usda.gov>>.

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